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REVIEW OF THE RETAIL DEVELOPMENT PLANS IN THE CHARLESTOWN NAVY YARD

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Summary and Introduction

The current plans for development of the Charlestown Navy Yard call for 238,000 square feet of leasable retail space by 1988. That would be slightly larger than Faneuil Hall Marketplace (215,000 square feet) and more than one-half of the size of Copley Place (375,000 square feet).

This report presents estimates of the likely consumer expenditures in the Charlestown Navy Yard. Our analysis suggests that residents, workers and visitors in the Navy Yard and other residents of Charlestown could support from 30 percent to 45 percent of the retail space in the Navy Yard in 1988. Therefore, the key factor in the successful leasing of the planned retail space is regional attraction. Could the retail development attract $20 to $25 million in sales from consumers from surrounding cities and towns? While it is possible that the planned retail development could be supported by merely one percent of metropolitan-wide retail expenditures, the Charlestown Navy Yard would have stiff competition from retail centers in the region.

In our judgment, the current development plans call for too much retail space in the Navy Yard by 1988. A development of 170,000 square feet, for example, could do well (sales of $150 per square foot) with 50 percent support from regional consumers and the other half from Navy Yard residents, workers and visitors, and other Charlestown residents. This seems more reasonable than upwards of 70 percent support from the metropolitan market.

Given the physical features of the buildings and the current plans, a delay in development of some of the retail space would probably be the best alternative, rather than proposing different uses (e.g., residential) for some of the planned retail space.

Impacts and Interactions

We estimate [illegible] the development of the Charlestown Navy Yard [illegible] for 1.5,000 square feet of [illegible] retail space [illegible]. This would be slightly larger than [illegible] this [illegible]. [illegible] more than one-half of the [illegible] of [illegible] space [illegible].

This report [illegible] of the [illegible] in the Charlestown Navy Yard. Our analysis suggests that residents, workers and visitors in the [illegible] Yard and [illegible] would support from [illegible] percent to [illegible] percent of the retail space in the Navy Yard [illegible]. Therefore, the key factor in the [illegible] of the proposed retail space is [illegible] development of [illegible] or [illegible] in [illegible] surrounding [illegible] and [illegible] retail development could be supported by [illegible] metropolitan-wide retail expenditures [illegible] Charlestown [illegible] more [illegible] the region.

In our judgment, the [illegible] development plans [illegible] retail space in the Navy Yard [illegible]. A development [illegible] feet, for example, could be well [illegible] percent support from regional consumers and [illegible] Yard residents, workers and visitors, and [illegible] this would be a reasonable [illegible] of [illegible] percent [illegible] metropolitan market.

Given the [illegible] of the buildings and [illegible], a [illegible] development of [illegible] the retail space would probably be [illegible], rather than [illegible] different [illegible] the [illegible] of the proposed retail space.

On the other hand, our numbers are only estimates based on prior studies, field observations and informed assumptions. We would change our conclusion if we could be convinced that the Charlestown Navy Yard would have, beyond mere size, special attractions that would pull consumers away from regional competitors, especially those in downtown Boston.

The rest of this report presents the method of analysis, the likely retail sales and space requirements, and key factors in the attractiveness of the retail

Method of Analysis

Our method of analysis resembles that used by Halcyon, Ltd.* We divided retail expenditures into three categories: (1) comparison goods (items for which price, quality and style are more important than convenience of shopping place), (2) restaurant services, and (3) convenience goods (e.g., snacks, magazines, drugs) and personal services (e.g., haircutting). Potential consumers fell into five categories: (1) residents of the Charlestown Navy Yard, (2) employees of businesses in the Navy Yard, (3) visitors to the national historic park, (4) residents in the rest of Charlestown and (5) residents in cities and towns in the Boston metropolitan area.

The most difficult consumer category to analyze is the "metropolitan residents." The key question is: how much of the regional retail market could the Charlestown Navy Yard capture?

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* Halcyon, Ltd. "Retail and Restaurant Potentials for the Historic Monument Area of the Boston Naval Shipyard at Charlestown," March 1980.

On the other hand, [illegible] attracted [illegible] our conclusion [illegible] would have [illegible]

The rest of this report [illegible]

[illegible]

Method of Analysis

Our method of [illegible] divided retail expenditures [illegible] (1) [illegible] convenience goods [illegible] (2) convenience goods (e.g., [illegible]) [illegible] (3) residence of the [illegible] in the Navy Yard, (3) [illegible] residence in the [illegible] rooms in the [illegible] area.

The most difficult [illegible] "metropolitan [illegible]" [illegible] retail market [illegible]

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* [illegible] 1962.

That is, how many consumers who live outside of Charlestown would be attracted to the Navy Yard and how much would they spend? The Navy Yard would need to attract merely one percent of the metropolitan area household expenditures to realize nearly 30 million dollars in sales. For example, the households in Somerville, Everett, Medford, Cambridge and Chelsea, alone (numbering 112,000), would typically spend over $400 million on retail goods (excluding restaurants) per year. One percent of that would amount to over 4 million dollars. However, that percentage (or capture rate) must be based on many assumptions concerning consumer perceptions and behavior related to the Charlestown Navy Yard and competing retail centers in the region.

In the absence of a firm basis for estimating the probable annual regional expenditures in the Charlestown Navy Yard, we estimated a range of likely expenditures for the other four categories, combined. We then estimated the retail space requirements for that range of expenditures (based on $150 and $100 per square foot) and compared the required retail space to the planned retail space. The difference was the space that would have to be supported by regional consumers. We then put that amount of space and the required consumer expenditures into perspective by discussing key factors in the Charlestown Navy Yard's regional attraction.

Therefore, for each of the three retail categories, we estimated likely expenditures by each of the four consumer categories (excluding the metropolitan consumers). The sources of our estimates were typical expenditures by category as reported by Halcyon (1980) and the BRA,*

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* "Downtown Crossing: An Economic Strategy Plan," Spring 1983.

updated to January 1985 dollars.* The sources for the estimates of number of consumers were BRA planning documents (1985) for residents, workers and visitors in the Navy Yard; and the Bureau of the Census for number of households in cities and towns. The basic data for this analysis are summarized in Figure 1.

Likely Retail Sales and Space Requirements

The probable retail expenditures in 1988 by consumer category are summarized in Table 1 (an update of the Halcyon method) and Table 2 (three sets of estimates based on previous BRA retail studies). The range for comparison goods, convenience goods and personal services combined, would be from $8.2 million to $12.5 million (January 1985 dollars). Those amounts of sales would support from 55,000 to 129,000 square feet of retail space (see Table 3) based on average sales of $100 per square foot to $150 per square foot. If rents were higher than a moderate $15-20 per square foot, then the estimated sales would probably support less space (i.e., establishments might need closer to $200 of sales per square foot to be profitable). Note that we are presenting ranges here to reflect uncertainty in actual behavior of consumers and in the type of retail businesses that actually fill the space. The available data are only estimates for "typical" consumers and businesses.

Based on field observations and staff consultations, we narrowed the range of estimates somewhat. Specifically, we expect that local consumers (within Charlestown and the Navy Yard) could support at least

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* Bureau of Labor Statistics, Consumer Price Index for All Urban Consumers, Boston, Massachusetts.

Table 1

CHARLESTOWN NAVY YARD AVERAGE ANNUAL RETAIL EXPENDITURES
HALCYON METHOD

RESIDENTS OF THE NAVY YARD

TYPE OF RETAIL	EXPENDITURES PER HOUSEHOLD	HOUSEHOLDS	ANNUAL EXPENDITURES
COMPARISON GOODS	435.00	1,353	588,555
RESTAURANT EXPENDITURES	289.00	1,353	391,017
CONVENIENCE/SERVICE	1,152.00	1,353	1,558,656
ALL RETAIL EXPENDITURES	1,876.00	1,353	2,538,228

NATIONAL HISTORIC PARK VISITORS

TYPE OF RETAIL	EXPENDITURES PER VISITOR	VISITORS	ANNUAL EXPENDITURES
COMPARISON GOODS	.96	900,000	864,000
RESTAURANT EXPENDITURES	1.92	900,000	1,728,000
CONVENIENCE/SERVICE	.32	900,000	288,000
ALL RETAIL EXPENDITURES	3.20	900,000	2,879,998

WORKERS IN NAVY YARD

TYPE OF RETAIL	EXPENDITURES PER WORKER	WORKERS	ANNUAL EXPENDITURES
COMPARISON GOODS	167.00	6,387	1,066,629
RESTAURANT EXPENDITURES	333.00	6,387	2,126,871
CONVENIENCE/SERVICE	400.00	6,387	2,554,800
ALL RETAIL EXPENDITURES	900.00	6,387	5,748,300

RESIDENTS OF CHARLESTOWN

TYPE OF RETAIL	EXPENDITURES PER HOUSEHOLD	HOUSEHOLDS	ANNUAL EXPENDITURES
COMPARISON GOODS	28.00	14,000	392,000
RESTAURANT EXPENDITURES	19.00	14,000	266,000
CONVENIENCE/SERVICE	54.00	14,000	756,000
ALL RETAIL EXPENDITURES	101.00	14,000	1,414,000

MARINA USERS

TYPE OF RETAIL	EXPENDITURES PER SLIP	SLIPS	ANNUAL EXPENDITURES
COMPARISON GOODS	75.00	560	42,000
RESTAURANT EXPENDITURES	75.00	560	42,000
ALL RETAIL EXPENDITURES	150.00	560	84,000

SOURCES: BOSTON REDEVELOPMENT AUTHORITY; HALCYON LTD.,RETAIL AND RESTAURANT POTENTIALS FOR THE HISTORIC MONUMENT AREA OF THE BOSTON NAVAL SHIPYARD AT CHARLESTOWN, MARCH 1980; U.S. BUREAU OF THE CENSUS, 1980;

Table 2

ESTIMATED RETAIL EXPENDITURES IN THE CHARLESTOWN NAVY YARD, 1988
RANGE FROM ALTERNATIVE METHODS

	METHODS			
	BRA1	BRA2	BRA3	HALCYON
EXPENDITURES ON				
COMPARISON & CONVENIENCE	3,795,500	6,046,000	8,384,000	8,095,040
RESTAURANTS	4,497,438	4,497,438	4,497,438	4,497,438
TOTAL RETAIL	8,292,938	10,543,430	12,881,430	12,592,470

Table 3

ESTIMATED RETAIL SPACE REQUIREMENTS IN THE CHARLESTOWN NAVY YARD, 1988
RANGE FROM ALTERNATIVE METHODS

	METHODS			
	BRA1	BRA2	BRA3	HALCYON
	SQUARE FEET OF RETAIL SPACE			
SALES PER SQ.FT.				
$150	55,286	70,290	85,876	83,950
$125	66,344	84,348	103,052	100,740
$100	82,929	105,434	128,814	125,925

70,000 square feet (with sales at $150 per square foot) and as much as 105,000 square feet (with sales at $100 to $125 per square foot). In January 1985 constant dollars, that would be as much as $10.5 million. For the planned retail development, local consumers could sustain from 30 to 40 percent of the total retail floor space.

Regional consumers would have to account for the other 55 to 70 percent of expenditures for the retail development to be fully and successfully leased. In terms of dollars, regional consumers would have to spend upwards of $25 million.

A few points about the potential local consumers are in order. First, the residents of the Charlestown Navy Yard are not a "captive" market for retail in the Navy Yard. The current residents tend to be young, single or in couples, professional, mobile, and oriented to downtown Boston. They will be important to businesses that offer convenience goods and personal services, as well as to stores that supply comparison goods.

Second, Charlestown residents are likely to continue to shop for convenience goods near their homes in Charlestown. Numerous empty storefronts in Thompson Square indicate that Charlestown residents do not constitute a large untapped retail market. However, changes in Charlestown's population, toward smaller families and young, professional condominium dwellers, may produce a market for certain comparison goods or special services that are not offered in Charlestown. Newer Charlestown residents who have a downtown orientation may be more mobile and more willing to shop at the Navy Yard than long-time Charlestown residents for whom local shopping patterns are more established.

Third, many of the 900,000 annual visitors to the U.S.S. Constitution arrive by tour bus and have a limited amount of time to spend at the Navy Yard before moving on to another sight. That pattern would need to change to get the visitors to frequent the Navy Yard's retail businesses.

As a final aside, the marina users would likely make a few retail expenditures in the Navy Yard (convenience goods, a few nautical supplies, food, etc.). We estimated that marina users (560 slips by 1986) would spend, at most, $150 per slip per year. This tentative figure could be somewhat greater if the retail development included a large marine supply store that could compete successfully with larger establishments in the region.

While we cannot pin down a number to represent excess retail space, we addressed the key question: What are the chances that regional consumers (outside of Charlestown) could support more than one half of the Navy Yard retail space? A share in that range would not seem to be too large for a regional shopping mall or a unique retail center like Faneuil Hall Marketplace. The key factors in assessing the regional retail potential of the Charlestown Navy Yard are (1) competing retail centers, (2) access and transportation links, (3) parking facilities, (4) types of retail goods and services.

Regional Competition

The Charlestown Navy Yard has plenty of competition for comparison goods: Faneuil Hall Marketplace, Downtown Crossing, Newbury Street and Boylston Street in Boston; Assembly Mall in Somerville, Meadow Glen Mall in Medford, New England Shopping Center in Saugus and Harvard Square in

Cambridge within ten miles; and several others within ten to twenty miles of Boston (see Figure 2). In Charlestown itself, the Bunker Hill Mall in City Square and shops in Thompson Square would compete for Charlestown residents. Further, the adjacent Hoosac Pier development (scheduled for 1985 completion) will include about 40,000 square feet of retail space and a restaurant of about 8,000 square feet in floor area.* Clearly, the retail establishments in the Navy Yard will need to be attractive in some special ways in order to secure a share of the regional market for comparison goods.

Transportation

The transportation links from the region to the Charlestown Navy Yard are good for automobiles and poor for public transit. Routes 93 and 1 converge near the Navy Yard and a ramp from Route 1 leads to Chelsea Street, adjacent to the site. However, the ramp and local streets do not form a clear path to the Navy Yard. Consequently, automobile access appears to be difficult or confusing for some motorists. Public transit consists of two MBTA bus routes along Chelsea Street from Haymarket (downtown Boston) to Sullivan Station (Charlestown) via Bunker Hill Street and Main Street. A shuttle bus operates twice daily between the Navy Yard and downtown Boston. However, the service lacks the convenience, frequency, and speed of a rapid transit line, such as the Orange Line that stops at Bunker Hill Community College and Sullivan Station. Yet, more frequent and convenient (i.e., bus stops in the Yard) bus service would be more than

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* Massport, Hoosac Pier Final Environmental Impact Statement, December 1982.

adequate given the short distance between the Navy Yard and downtown Boston. For the healthy pedestrian, a walk from the Navy Yard to Haymarket takes about fifteen minutes. Regarding retail trade, the improvement of public transit service and clarification of the automobile paths to the Yard would enhance the attractiveness of the retail development. In addition, a water taxi service from the Waterfront (Christopher Columbus) Park area to the Navy Yard might attract consumers and fit nicely into the overall development concept.

From Charlestown, access to the Navy Yard is easy by car, but pedestrian access is hampered by the lack of entry points, the barrier of the one-quarter-mile-long Ropewalk, and the network of roads and highways. Psychological barriers due to the Navy Yard's status of "off limits" to residents for many years, may persist.

Parking

Parking space will be important to retail development in the Navy Yard. Most potential consumers from outside of the development would travel to the Navy Yard by automobile. Current plans for parking facilities appear to be adequate if they are carried out in a timely fashion.

Type of Retail

The fourth key factor in retail potential is the type of retail trade. The retail development in the Charlestown Navy Yard needs something to set it apart from the competing regional retail centers. Perhaps retail in the Yard could express a theme (nautical, craft, etc.)

or specialize in a particular type of retail (e.g., furniture, sports equipment, etc.).

In conclusion, the probability that regional consumers would support up to three-quarters of the planned retail space in the Navy Yard by 1988 is moderate at best. In our judgment, the Navy Yard should have less than 238,000 square feet of retail space by 1988, perhaps closer to 170,000 square feet (70 percent of planned). While some of the excess space could be developed for residential, office, wholesale trade or recreational uses, the ultimate use for all of the 238,000 square feet could be retail. Given the physical layout of the buildings, the retail plans make sense. The timing of the retail development could be altered. For example, some of the retail development in buildings 33, 34, 38 and 39 could be phased further into the future when the Navy Yard would be better established as a retail center.

Our conclusion could change if other information, insights, or developments convince us that the Charlestown Navy Yard has sufficient regional attractiveness to compete as a large regional shopping center.